

Wokbolic: Parabolic 2.4GHz Evolution

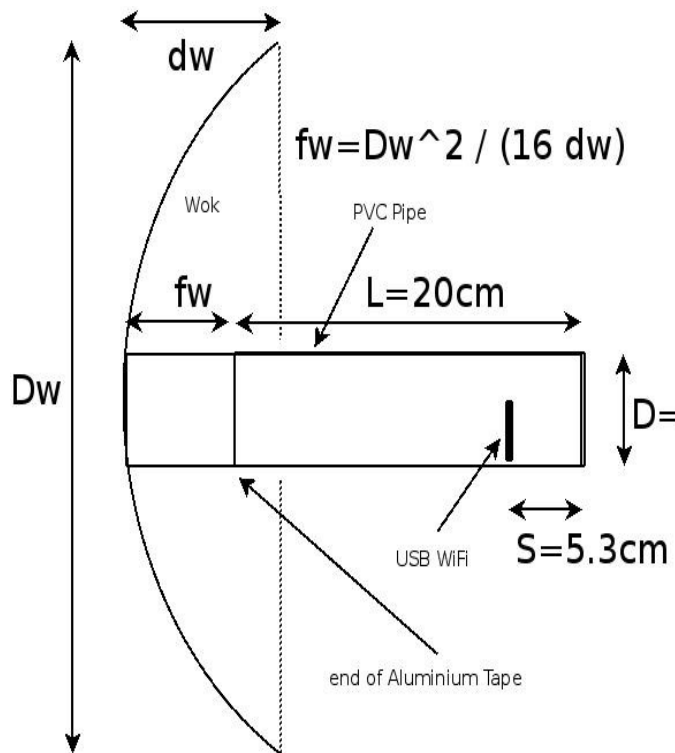
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Low cost Internet access, if possible free Internet access, is the ultimate dream of the majority Internet users in developing countries including Indonesia.

In the past, we see the development of tincan antenna (cantenna) to create a short distance link up to one (1) km between two points at high speed upto 54Mbps using Wifi technology. Such technology is sufficient for most applications. Tincan antenna has several major draw back especially due the requirement to make a 1/4 wavelength copper antenna in the tincan that must be matched to the operating frequency. Most tincan has a diamater around 10 cm and more that doesn't resonant to the operating frequency. In addition, the antenna gain is low about 10-11dBi.



Since 2006, Gunadi an ordinary Indonesian live about 2 hours drive from Jakarta, Indonesia is developing a wokbolic, an acronym for wok for parabolic antenna with a modified tincan antenna. Gunadi put the picture as well as the guidance on the detail of how to build the wokbolic antenna on the web. Since then, many Indonesian built the wokbolic antenna and use it as high performance & long distance up to 3-4 km Wifi link in their neighbourhood network.



In Wokbolic, the tincan is replaced using a three (3) inches PVC tubing enclosed by aluminum tape to create a 20 cm long tincan. Instead of using an Access Point with 1/4 wavelength copper tubing, Gunadi uses USB Wifi and plug the USB Wifi into the PVC tubing. As a result, no loss for the RF power as experienced by the previously use 1/4 wavelength copper tubing.

Please see the figure of the detail. Please note that the USB Wifi is IN the PCV tubing about 5.3cm from the end of aluminium tape area.

The total cost of the setup is about US\$35, that include the US\$25 of the USB Wifi. It takes approximately 15-30 minutes to make one from scratch.

Various details of the Wokbolic technology can be found at [http://opensource.telkomspeedy.com/wiki/index.php/Wajanbolic\\_e-goen](http://opensource.telkomspeedy.com/wiki/index.php/Wajanbolic_e-goen). It is in Indonesian

language. It has lots of picture in it so one can easily follow the instruction on how to built one.